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DERMABRASION: AN APPRAISAL.

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Abrasion of one kind or another has been used for centuries to improve the appearance of the skin. Burks (1956) outlines its history and development. Dermabrasion by rasps and rotating metal wheels was introduced in Germany by Kromayer in 1905, and later developed by him. In 1947, Iversen in the United States used sandpaper to abrade the skin. Kurtin (1953), also in the United States, reverted to the technique of Kromayer which has become popular there.

In the Skin Department of the London Hospital dermabrasion has been practised since 1954. This paper presents our experiences with dermabrasion and attempts to estimate its worth. The details of the technique have been described by Burks (1956) and Pegum (1957). In brief, rotating steel toothed wheels abrade a skin surface made rigid and anaesthetic by a sprayed mixture of fluorinated hydrocarbons (Arcton or Freon): alternatively, local anaesthesia is induced by a 2% solution of Xylocaine (lignocaine) with adrenaline, 1 in 80,000, and the skin held taut to give a suitably rigid surface.

MATERIAL

From mid-1954 to mid-1958, 110 patients were treated by dermabrasion in this department. Eleven were treated for epitheliomas and the remainder

for various benign conditions, mainly acne scars, accidental or deliberate tattoo marks and port-wine stains. Some of the cases have been reported elsewhere by Pegum (1957) and Ridley (1958).

All the patients (11) treated for epitheliomas attended for assessment of the results. It was decided before asking the patients in the main group to attend for assessment that 12 cases should be classified as therapeutic failures without further examination. Of the other 87 eligible patients, 4 lived too far away from the hospital to be asked to attend and contact had been lost with a further 12 ; 71 patients, therefore, were asked to come to the hospital and 58 actually attended. Of the 29 patients who were not seen again, photographs were available of their appearance before and after treatment in 16.

It was thus possible to assess the results of treatment in 86 patients (12 definite failures, 58 seen, 16 photographic assessments) out of the 99 eligible in the main group (Table I).

TABLE I.—*Number of Patients Assessed in the Main Group.**

Number of patients treated during the period 1954 to 1958		99
Attended hospital for assessment	58	
Definite failures (not asked to attend)	12	
Did not attend hospital	29	
Of these, assessed from photographs	16	
	86	
Total number of patients assessed		86
Total number not assessed		13

* The 11 patients treated for epitheliomas all attended for assessment.

METHOD.

Each patient in the epithelioma group (11) was assessed by two doctors—the doctor who had performed the treatment and another dermatologist, the result being recorded as " clear " or " not clear ". The large miscellaneous group presented a different problem since the result of treatment had to be assessed from a cosmetic point of view. It was felt that some check on the opinion of the dermatologists who had carried out the treatment would be desirable so an unbiased observer (S. L. M.) who had no connection with the Department was asked to take part.

A photograph had been taken of each patient before treatment began and the cosmetic result was assessed by comparing the patient's appearance after treatment with the photograph. It was arranged that every patient in the main group would be seen separately by three observers : first by the " independent " observer, then by a dermatologist who had not treated the patient, and finally by the doctor who had. (Patients were allocated to the non-treating dermatologist by a pre-arranged random scheme.)

The observers assessed the results on a four-point scale (much improved = + 2, improved = + 1, no change = 0, worse = − 1). In addition, the " independent " observer and the doctor who did the treatment asked the patients for their opinion of the results and answers were recorded on the same four-point scale. The observers always made their own assessments before questioning the patient.

An attempt was made to assess the results in patients who were unable to attend the hospital for assessment by comparing photographs taken before and after treat-

ment. This assessment was made by two observers independently, one of the dermatologists (C. M. R.) and the " independent " observer (S. L. M.). In addition, questionnaires were sent to the 4 patients who lived at a distance and the 13 who failed to attend for assessment. Patients were asked to mark one of the following statements : " The skin is worse ", " . . . is unchanged ", " . . . shows some improvement ", " . . . shows much improvement ". They were also asked to give any relevant comments. Answers were coded in the same way as before : 14 of the 17 patients returned the questionnaires.

Results.

When the observers' assessments were analysed, it was clear that there was considerable disagreement between them on the categories " much improved " and " improved ". There was a tendency for the dermatologists to put more patients into the " much improved " category than the independent observer, thus suggesting that a presumably unbiased observer may be useful in this kind of trial. The two categories have been combined in the analyses that follow, to form a single category—" improved ". After this amalgamation, there was complete agreement between all three observers in 38 out of the 58 patients seen in the main group and agreement between the two observers in 12 out of the 16 cases assessed photographically.

In order to simplify the presentation of the results, " no change " and " worse " have been combined to give a " failed " category. In the tables that follow, cases are only shown as " improved " when all observers agreed on this assessment and the results, therefore, are recorded in the most conservative way : the improvement rate, then, is minimal. Similarly, cases recorded as " failed " are those where all the observers agreed that the assessment was " no change " or " worse " (or the treatment was regarded as a failure before the trial began and the patient was not sent for). Thus the failure rate is also a minimal one since only agreed failures are recorded. The maximum failure rate in this trial is given by considering as failures all the patients who were not unanimously agreed to be " improved ".

The results of treatment of the small group of patients with epitheliomas are given in Table II. The 11 patients were all seen and assessed by two derma-

Table II.—*Number of Patients with Epitheliomas Seen and Assessed as " Clear " by Both Observers*

Diagnosis.	Number of cases.	Number of cases " clear ".	Radiodermatitis.
Basal cell epithelioma, solitary	5	5	—
Basal cell epithelioma, multiple	1	1	—
Squamous cell epithelioma, superficial and well differentiated	1	1	—
Intra-epidermal epithelioma	2	2	—
Basal cell epithelioma + radiodermatitis	2	2	Both improved
Total	11	11	—

tologists independently—the epitheliomas as " clear " or " not clear " and the radiodermatitis, present in 2 of the 11 patients, as " improved ", " unchanged ", or " worse ". Both observers agreed on all the assessments shown in Table II. Treatment was successful in all cases.

The other 99 patients were divided into four diagnostic categories ; acne scars, tattoo marks (accidental or deliberate), port-wine stains, and a residual group of all other diagnoses. The results for these groups are given in Tables III, IV, V, VI and VII.

TABLE III.—*Number of Patients Seen and Assessed as " Improved " by All Three Observers.*

Diagnosis.	Number seen.	Number " improved ".
Acne scars	16	10
Tattoo marks (accidental or deliberate)	18	16
Port-wine stains	14	5
All other diagnoses	10	4
Total	58	35

TABLE IV.—*Number of Patients Assessed from Photographs as " Improved " by Both Observers.*

Diagnosis.	Number assessed.	Number " improved ".
Acne scars	5	3
Tattoo marks (accidental or deliberate)	4	3
Port-wine stains	2	0
All other diagnoses	5	5
Total	16	11

TABLE V.—*Number of Patients Treated and Number Assessed as " Improved " by All Observers (Both Methods) ; Percentage of Patients " Improved ".*

Diagnosis.	Total number of patients.	Number assessed.	Number " improved ".	Number " improved " as % of: Number assessed.	Number " improved " as % of: All patients.
Acne scars	27	21	13	62	48
Tattoo marks*	26*	24	19	79	73
Port-wine stains	18	16	5	31	28
All other diagnoses	28	25	9	36	32

* Accidental, 18. Deliberate, 8.

Tables III and IV show the numbers of patients " improved " amongst the 58 patients seen and the 16 patients where photographs only were assessed. Although we feel that the photographic assessment was not so satisfactory a method, the results from it are consistent with those from the assessment of actual patients. The results have therefore been combined in Table V. This

table also shows the number of patients " improved " as a percentage of the numbers assessed and as a percentage of all patients. This second percentage is the most pessimistic figure for the value of treatment since it assumes that none of the patients who were not assessed was " improved ". It is clear from this table that treatment was most successful for tattoo marks and fairly successful for acne scarring but not impressive for port-wine stains. The group of " all other diagnoses " includes patients with 17 different conditions; numbers treated for any diagnosis are therefore small and conclusions can only be very tentative. Detailed results for this group are given in Table VI.

TABLE VI.—*Number of Patients Treated in " All Other Diagnoses " Group : Number Assessed as " Improved " by All Observers (both Methods) and Number Assessed as " Failed " by All Observers (Including those Assessed as Failures before Trial Began).**

Diagnosis.	Total number of patients.	Number assessed.	Number " improved ".	Number " failed ".
Adenoma sebaceum	2	2	—	2
Epidermal naevus	4	3	—	2
Keloid	4	3	2	—
Moles	3	3	3	—
Small-pox scars	3	3	—	2
Total	16	14	5	6

* In addition, one case each of the following was treated with the agreed result indicated : " *improved* "—lymphangioma, scar after abscess, sebaceous cyst, telangiectasia : " *failed* " —alopecia areata, hirsutes, ingrowing hairs, lentigines, lupus erythematosus, plantar warts : *assessment not agreed*—lichen sclerosus et atrophicus : *not assessed*—black hairy tongue.

The numbers of patients where the treatment was a definite failure are given in Table VII. These numbers are made up of two kinds of " failure ": those patients who were assessed by all observers as " no change " or " worse " and those who were thought to be definite failures for one reason or another before the assessment of the series began and were not asked to attend. In Table VII, the numbers in brackets refer to those patients who were not sent

TABLE VII.—*Number of Patients Treated and Number Assessed as " Failed " by all Observers (Both Methods) or Assessed as Failures Before Trial Began ; Percentage of Patients " Failed ".*

Diagnosis.	Total number of patients.	Number assessed.	Number " failed ".*	Number " failed " as % of Number assessed	Number " failed " as % of All patients
Acne scars	27	21	2 (0)	10	7
Tatto marks	26	24	2 (2)	8	8
Port-wine stains	18	16	4 (0)	25	22
All other diagnoses	28	25	12 (10)	48	43

* Numbers in brackets are numbers of patients assessed as failures and not asked to attend.

for. This table sets a minimum figure for the failure rate of this treatment in the trial.

It was found that the patients themselves tended to give a higher proportion of " much improved " assessments to the doctor who had treated them than to the independent observer—another indication of the value of " outside " observers in this kind of trial. However, the assessments have been combined to form " improved ", and " failed " in showing the results of patients' own assessments (Table VIII) in the same way as was done for observers' assessments.

TABLE VIII.—*Patients' Own Assessments at Interview.*

Diagnosis.	Number assessed.	Number " improved ". (same statement to both observers)*	Number " failed ".
Acne scars	16	14	1
Tattoo marks	18	18	0
Port-wine stains	13	8	4
All other diagnoses	10	6	4
Total	57	46	9

* In two cases, different statements were made to the two observers.

TABLE IX.—*Patients' Own Assessments on Questionnaires.*

Diagnosis.	Number assessed.	Number " improved ".	Number " failed ".
Acne scars	6	6	0
Tattoo marks	1	1	0
Port-wine stains	2	0	2
All other diagnoses	5	4	1
Total	14	11	3

After this combination, the patients' assessments to the independent observer and to the doctor agreed in 55 out of the 57 cases. These results only apply to 57 of the 58 patients who attended hospital (one patient's assessment was not recorded). Table IX gives the results recorded by patients on the questionnaires sent to them. Of the total of 71 self-assessments by patients, 57 considered themselves " improved " (80%) and 12 considered themselves as " failures " (17%). The results in both these tables are consistent with the previous results (Tables V, VI and VII), showing again that treatment appears to be most successful for acne scarring and tattoo marks.

DISCUSSION.

We regard the results as those of a preliminary survey. The follow up period varies from just over four years to about two months : for the first year or two the pace of treatment was slower than it became later. It will be of interest to study the same patients again after a further lapse of time.

Assessed as objectively as possible, dermabrasion seems helpful in improving the skin in various disorders. It seems clear that patients too appreciate the results of treatment. Acne scars and tattoo marks are particularly susceptible of improvement. In a patient with cystic acne, the treatment improved scars left by previous incisions. We have found that abrasion of such cysts is preferable to incision in the first place. Planing is also useful for dealing with epidermal cysts. In dealing with tattoo marks, the pigment is removed partly by the actual abrasion and partly by piecemeal extraction from the abraded surface. The relatively poor results in treating port-wine stains may be due to the fact that in many of these patients only a small part of the lesion had been treated, sometimes giving a patchy effect so that the overall cosmetic result was poor. Dermabrasion may be used in frank conjunction with other techniques—notably in the removal of keloids before X-ray treatment is given. For epithelial neoplasms, dermabrasion is useful, particularly in the elderly, those with multiple lesions, and where there are difficulties in the way of excision or radiotherapy. Good results have been obtained with lesions on the trunk which are too large for simple excision and which with radiotherapy may give indurated telangiectatic scars, sometimes breaking down. The follow-up period has not yet, however, exceeded two years for any patient. Careful supervision afterwards is obviously essential in evaluating a new technique for dealing with epitheliomas.

Dermabrasion is unsatisfactory in coloured people because of bizarre and unpredictable colour change. Two of the three cases of smallpox scars were failures for this reason. the scarring itself being as easy to improve as that of acne. Epidermal naevi do not respond well : they recurred in each case. The site is important in determining results. Facial skin is relatively thick and can safely be planed deeply : it heals well. Skin on the forearm is thin, particularly on the flexor aspect where coarse hairs are also scanty, and to remove a tattoo completely may be impossible without leaving scars. Abraded areas on the leg healed very slowly in some cases, even when the patients were young, healthy women. Psychological difficulties are sometimes encountered. Some patients cannot tolerate the procedure. Small children are rarely suitable subjects and a general anaesthetic may be justifiable for them if the lesions are causing much concern. Otherwise, it is an out-patient procedure. Some patients make what appear to the dermatologist to be excessive demands for repeated or very extensive treatments. Four of the cases counted as failures and not asked to come for asessment fell into this group.

Complications of the treatment are few. Pigmentary changes in dark skins have been mentioned. Hypertrophic scars may develop and gradually subside : keloids rarely occur. Milia can be a nuisance. Haemorrhage is scarcely ever troublesome. The technique, however, demands a high degree of concentration if good results are to be obtained : it is best performed at a session set aside

for the purpose and not during a busy clinic. Only one or two cases can be dealt with properly by the medical and nursing staff in one session. If more than one case is treated a recovery room is essential. Dermabrasion is without doubt a helpful addition to therapy. It may be that in time its range will be further and profitably widened.

Summary.

An attempt has been made to assess the results of treating 110 patients by dermabrasion. A small number (11) of patients with epitheliomas was assessed independently by two dermatologists. who agreed that in every case the result was good. Of the other 99 patients, 86 were assessed : 58 were seen at hospital by three observers independently, 16 were assessed by two observers from photographs only and 12 were considered as failures before this review began. All the observers agreed that, of the patients assessed, 13 out of 21 with acne scars and 19 out of 24 with accidental or deliberate tattoo marks were improved. The results for patients with port-wine stains were not impressive. It is concluded that dermabrasion is a good method of treatment for acne scars and tattoo marks but that its value in other conditions is still doubtful although in some it may be useful. Some contra-indications and points of general interest are discussed.

We wish to thank our successive Sisters and Staff Nurses for their help in carrying out the treatment. We also wish to thank the patients for their co-operation.

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THE TREATMENT OF PSORIASIS AND ECZEMA WITH GRENZ-RAYS.

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Radiotherapy has played a major part in the treatment of skin disease during the last 50 years, but indications for its use are becoming fewer as new forms of treatment are developed which carry less risk of undesirable sequelae. The use of harder x-ray therapy (at 80–110 KV) is considered unwise in most cases of psoriasis because there is a tendency for lesions to recur at the same sites and over the years an excessive total dose of radiation may be given. Bucky and Combes (1954) considered that the results were variable, even in the same patient at different times, but that with Grenz radiation the response was more regular and rapid and repeated dosage did not lead to dangerous sequelae.

Soft x-rays (Bucky rays ; Grenz rays) have not been used in this country to the same extent as the higher voltage rays. Their use has been recommended for a variety of skin diseases (Bucky and Combes, 1956). Because of their superficial action and lack of penetration it is claimed that repeated doses and eventually very large total doses, can be given to the same area without risk of radiodermatitis which would otherwise result from the use of more penetrating x-rays in the same dosage. We do not know, however, of any published work which confirms this belief.

Harber (1958) reported the results of treatment of patches of psoriasis both with Grenz and with harder x-rays and suggested that they were equally effective in comparison with an untreated patch. He found also that both types of irradiation produced a significant improvement in every case treated, except for a group of ten patients with lichenified patches greater than 300 sq. cm. in total area. These results, however, were based on a follow-up period of only three weeks from the start of treatment.

Kopp and Reymann (1957), in psoriatic patients with extensive symmetrical eruptions, treated one side only with 200 r weekly for three doses and showed a marked difference between the two sides at the end of the three week period. They then gave the same dose to the untreated side and showed that at six weeks after the start of treatment both sides were equally improved. Another

group of hospitalised patients were receiving tar baths and it was found that the side which was also treated with Grenz rays was improved to a greater extent than the other side which was being treated only with tar baths.

Davies (1956) has suggested that objective assessment of radiotherapy shows less satisfactory results than clinical impressions might indicate and that suggestion may play some part in producing some of the favourable results.

In some preliminary trials we were impressed with the apparent consistency of satisfactory results with the use of Grenz-ray therapy in cases of psoriasis. But we appreciated that clinical impressions may be deceptive ; there is a considerable difference of opinion as to the results that can be obtained by the use of these softer rays in the treatment of eczema and psoriasis and this study was carried out in an attempt to make a more objective assessment.

Method.

A total of 192 patients were studied. Of these 87 had psoriasis and 105 had eczema. The question of controls then arose. In eczematous eruptions and to a less extent in psoriasis, prognosis is extremely difficult and the matching of control cases almost impossible. It is, however, fairly safe to predict that an eruption symmetrically affecting the limbs is likely to continue to behave similarly on the two sides unless a new factor is introduced.

Wherever possible, therefore, bilateral, symmetrical eruptions, chiefly of the limbs, were selected in order to facilitate controlled assessment. Both sides were treated in exactly the same way, except that, unknown to the patient, a lead screen was inserted on one side between the source of radiation and the parts exposed to treatment. Other local treatment was given at the same time and consisted of the lotions or ointments usually prescribed in these cases, the two sides being treated exactly the same.

At first the dose of Grenz rays given was 200 to 300 r on three occasions at weekly intervals. However the majority of cases in this series were given two or three weekly doses of 400 r each since the lower dose appeared to be less effective. The apparatus was a standard Grenz-ray machine, treatment being given at 10 KV, H.V.L. 0·02 mm., Al., F.S.D. 30 cm., areas treated 20 cm. square or less.

The condition of the patients' skin was assessed at monthly intervals during an average period of three months.

Results.

1. *Psoriasis*

Of a total of 91 patients treated, 48 were males and 43 females. In three cases the nails only were treated, without improvement. These cases were not included in the main series and two cases were omitted from the final assessment because of irregular attendance. The remaining 86 cases are divided into two groups—Group A in which the lead screen was used on one side and Group B in which control screening was omitted.

It will be seen from these results (Table I) that the patients in Group A showed 77·8% improvement on their first assessment which was made within a week or two of the conclusion of radiotherapy. This improvement, however,

TABLE I.—*Assessment of Results Shortly After Completion of Radiotherapy.*

Group A. *Lead screen used.*	
Total number of cases treated	39
Improved equally on both sides	17 (43·5%)
Improved on irradiated side only	13 (33·3%)
Total improved	30 (76·8%)
Not improved	9 (23·2%)
Group B. *Lead screen not used.*	
Total number of cases treated	47
Improved	29 (61·7%)
Not improved	18 (38·2%)

cannot all be attributed to radiation since nearly half of the control cases showed an equal improvement on the screened (untreated) side. There remained in Group A only 13 patients (33% of the total) in whom there was a clear improvement on the irradiated side as compared with the control.

	Improved.	*Not improved.*
Control side	17	22
Treated side	30	9

$x^2 = 7{\cdot}71$, 1 degree of freedom, $p < 0{\cdot}01$.

Thus there is a "highly significant" difference between the treated and controlled sides, i.e. treatment is effective.

When these patients were seen later during the follow-up period, it was found that six of them either had not maintained their improvement or that the control side had sufficiently improved to catch up so that there was eventually no difference between the treated and untreated areas. Thus only seven of the original thirty-nine cases (18%) showed an improvement on the irradiated side as compared with the control at the end of the follow-up period.

	Improved.	*Not improved.*
Control side	21	18
Treated side	28	11

$\chi^2 = 1{\cdot}98$, $0{\cdot}20 > p > 0{\cdot}10$.

Now there is no significant difference between treated and control sides, i.e. treatment is not shown to be effective.

Of the 27 cases (Groups A and B) which showed no improvement with Grenz-ray therapy, eight were of chronic lichenified psoriasis and three of pustular psoriasis.

(ii) *Eczema.*

Of a total of 105 cases treated, 63 were males and 42 females: 18 of these were not included in the final analysis because of irregular attendance. The

remaining 87 cases were again divided into two groups, those with control screening and those without. The assessment of these cases made at the conclusion of radiotherapy and shown in Table II.

TABLE II.—*Assessment of Results Shortly After Completion of Radiotherapy.*

Group A. *Lead screen used.*

Total number of cases treated	46
Improved equally on both sides	19 (41%)
Improved on irradiated side only	12 (26%)
Total improved	31 (67%)
Not improved	15 (33%)

	Improved.	*Not improved.*
Control side	19	27
Treated side	31	15

$\chi^2 = 5{\cdot}30,\ p < 0{\cdot}05.$

The difference is " significant ", i.e. treatment is effective.

Of the twelve cases which were improved on the irradiated side only, two did not maintain the initial improvement and in another two cases the control side later improved to an equal extent. Thus in only eight cases out of 46 (17%) was a definite clinical improvement maintained relative to the control side.

	Improved.	*Not improved.*
Control side	21	25
Treated side	29	17

$\chi^2 = 2{\cdot}15,\ 0{\cdot}20 > p > 0{\cdot}10.$

There is no significant difference between treated and control sides, i.e. treatment again is not shown to be effective.

The results in Group B are closely in accord with Group A. The immediate assessment is shown in Table III.

TABLE III.—*Assessment of Cases Shortly After Completion of Radiotherapy.*

Group B. *Lead Screen not used.*

Total number of cases treated	41
Improved	27 (66%)
Not improved	14 (34%)

DISCUSSION.

The results at first suggest that this form of irradiation produces a considerable improvement in about two-thirds of the cases treated, irrespective of whether they are suffering from psoriasis or eczema. These results, however,

are shown to be much less satisfactory by the use of the screening technique and adequate follow-up.

This observation emphasized the need for control areas: these patients were receiving other local and systemic treatment at the same time as radiation and no doubt much of the improvement resulted from this. Perhaps suggestion provided by the impressive performance of irradiation also made some contribution.

Grenz-ray therapy may produce clinical improvement in both psoriasis (35%) and in eczema (26%) with a total dose of 600–1200 r if this is assessed three to four weeks after the start of treatment. But further observation during a period of up to twelve weeks often shows that either this improvement is not maintained or the untreated (screened) side improves to the same extent.

We conclude therefore that Grenz-ray therapy in the dosage used in this study of the treatment of eczema and psoriasis produced some temporary benefit in a limited number of cases.

Summary.

1. One hundred and ninety-two patients were treated with Grenz-ray irradiation and the results observed; 105 were cases of eczema and 87 of psoriasis.

2. Symmetrical bilateral eruptions were chosen whenever possible; equal doses were given to both sides but a lead screen was inserted on one side, unknown to the patient. The usual local and systemic treatment was given at the same time.

3. Immediate improvement took place in 62–79% of the cases of psoriasis and in 66–67% of the cases of eczema.

4. Assessment of these results against control areas showed that only 27% of the eczema patients were improved at the end of the fourth week, and only 33·6% of the cases of psoriasis. On further follow-up over an average period of three months these figures were reduced to 17% and 18% respectively.

5. It is perhaps to be expected that this improvement is not always maintained. It would appear therefore that Grenz-ray therapy has a useful although limited part to play in the treatment of eczema and psoriasis.

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GENERALIZED PUSTULAR PSORIASIS.

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During the last few years many papers have been devoted to the rare generalized forms of pustular psoriasis. Three further patients with this condition are reported here as they raise points of special interest, notably a possible relationship between the acute pustular phase and the therapeutic administration of adrenal steroid hormones. The literature is briefly reviewed as few of the recent publications on this subject have appeared in English.

Although the micro-abscess of Monro is a supposedly regular histological finding in psoriasis, clinically recognizable pustules are uncommon. The term pustular psoriasis implies the formation of sterile pustules as an integral part of the disorder and does not include secondary bacterial infection which may infrequently occur on plaques of psoriasis.

There are three types of localized pustular eruption in which a relationship to psoriasis has been suggested.

(i). Plaques of psoriasis otherwise typical in morphology and histology may show sterile superficial pustules. Schuppener (1958) suggests that the term "psoriasis with pustules" be used for this condition.

(ii). The Barber type of pustular psoriasis (or pustular bacterid) involving the palms and soles. Everall (1957) and Ingram (1958) found that about 25% of cases had typical psoriasis elsewhere and considered this disease as a manifestation of psoriasis although they recognized that other factors, e.g. eczema, might be operating.

(iii). Acrodermatitis continua of Hallopeau and dermatitis repens of Radcliffe Crocker. The similarity of these two conditions was stressed by Barber and Eyre (1927). Ingram (1958) considered that in this type also there was a relationship with psoriasis, although this is more controversial (Streitmann, 1955; Kogoj, 1951).

Quite different is the rare severe form of generalized pustular psoriasis usually known as the Zumbusch type (Zumbusch, 1910). In typical cases there is a history of ordinary psoriasis and often also of a rheumatoid type of arthritis. The generalized eruption has a sudden onset associated with high fever and very serious general condition. Often no precipitating cause is found, but strong local applications, arsenical or antimalarial therapy, general infections and various endocrine and emotional disturbances have been incriminated. The eruption usually starts in the flexures and around pre-existing lesions which become more active. It consists of an ill-defined erythema with multiple pin-

head sized pustules. These are very superficial, whitish-yellow and show no follicular arrangement. They dry up to form yellow-brown crusts which separate to leave a reddish-brown or even purple shiny surface. The eruption spreads rapidly for a few days and may involve large areas. There is a tendency to central clearing giving rise to the characteristic polycyclic edge of erythema and pustulation. Itching is seldom prominent but burning pain is usual. Mucosal lesions are very common and distressing. Remission of the pustular phase is usual in a variable period of days or weeks and the skin may then become normal in a few days or there may be a persistent erythroderma.

There are many variations of this picture. The pustules may appear on a psoriatic erythroderma and in this type particularly there may be strikingly regular cycles of localized or widespread pustulation. In extreme cases there may be a persistent bullous eruption resembling pemphigus. In all forms there is a high recurrence rate and high ultimate mortality. Response to therapy is very poor although there have been occasional favourable reports of various treatments, including steroids, antibiotics and A.T.10.

Although this eruption may bear no clinical resemblance to psoriasis it is usually accepted as a psoriatic manifestation. Schuppener (1958) thought that it represented the extreme form of exudative psoriasis and that there was a complete spectrum from chronic psoriasis through psoriasis with pustules to the various types of pustular psoriasis, which he defined as those cases showing severe disturbance of the general health. The psoriatic nature is confirmed by the strong family history and by the histology. This shows the usual changes of psoriasis with marked infiltration by polymorphs, in the form of micro-abscesses of Monro, larger lesions apparently indistinguishable from the spongiform pustule of Kogoj, or definite subcorneal pustules. A patient described by Degos *et al.* (1953) showed all these changes in one section.

Pustular psoriasis is in many respects strikingly similar to two other forms of generalized pustular dermatosis, impetigo herpetiformis and the generalized or malignant form of acrodermatitis continua of Hallopeau. Thus the morphology, the histology, the severe generalized illness and tendency to recurrence are common to all. The differences are mainly those of the associated disorders : impetigo herpetiformis may arise *de novo* but is more often associated with pregnancy or hypoparathyroidism, and in acrodermatitis continua the pre-existing skin lesions are characteristic. The close relationship is further emphasized by intermediate cases. Koch (1952) reported a patient with a family history of psoriasis who developed impetigo herpetiformis in pregnancy, later developing generalized pustular psoriasis and finally psoriasis vulgaris. Möslein (1959), who reviewed the literature very fully, showed that 10% of all reported cases of impetigo herpetiformis associated with an endocrine or metabolic disturbance had a history of psoriasis. The relationship of these three conditions has been discussed in several papers (e.g. Ebert, 1933 ; Le

Coulant, 1957 ; Lapière, 1958 ; Soltermann, 1958). Most authors consider that they are slightly different facets of one basic pathological process. However, as we do not yet know the fundamental cause of psoriasis and have no specific test for latent psoriasis, it does not seem possible to go further than von Zumbusch (1910) who was unable to decide whether the disease he reported was a hitherto undescribed form of psoriasis or a combination of psoriasis and some other condition. We can only conclude that all these pustular dermatoses, localized and generalized, represent a pattern of reaction to which psoriatics are more prone.

Case Reports.

Case 1.

A spinster aged 50 with no family history of psoriasis was admitted with acute mercury intoxication and psoriasis. She had had psoriasis on the elbows and knees from the age of three years, with recurrent severe generalized attacks from the age of nineteen. For six years these had been occurring two or three times yearly, each attack lasting about two months. The present attack had been in no way unusual and had followed an infection. Her usual treatment with a mercury ointment had provoked acute mercurialism with diarrhoea and colic followed by malaise, headache, fever, dysphagia and jaundice. She had used this ointment for many years and was using up to 25 lbs a year ! The urinary output of mercury was 970 μg. daily. The acute symptoms settled in a few days and to control the psoriasis she was given prednisone, 15 mg. daily. There was a dramatic improvement in ten days. The dose was reduced over the next three months to 2·5 mg. on alternate days, and then discontinued.

Two weeks later there was a sudden relapse. Apart from the steroid withdrawal there was no other apparent stress. As usual, there were multiple small lesions but each was surmounted by a very superficial yellowish-white pustule 1–3 mm. across. Within seven days, despite triamcinolone therapy (12 mg. daily), she became very ill with high fever, many new lesions and enlargement of the old ones (Figs. 1 and 2). The whole body surface was involved and pustules were absent only on the face, palms and soles. The lesions on the legs were the last to appear and in places showed a spreading polycylic outline with central clearing. There were no mucosal lesions. There was a polymorphonuclear leucocytosis and the serum calcium was 9·3 mg. %. The pustules were repeatedly sterile. Biopsy showed a large subcorneal pustule at the edges of which were changes as seen in the spongiform pustule. For the next 4 days she was extremely ill, despite a larger dose of prednisone (20 mg. daily) than had previously proved so effective. Then, within three days of starting tetracycline (1 G daily) the high fever settled and there were no new pustules. The resulting severe erythroderma improved slowly for three months when she developed a further episode of widespread pustulation and was desperately ill for two weeks. This attack was not related to any infection or reduction of steroids but followed three days after an emotional upset. There was no dramatic response to tetracycline on this occasion and the resulting erythroderma was of even greater severity. It slowly improved with ACTH and prednisone but, two months later, she developed an acute rheumatoid type of arthritis of first one and then the other knee from which sterile pus was withdrawn. Both the arthritis and the erythroderma have persisted for a further four months.

Case 2.

An engineer aged 66 was admitted with exfoliative psoriasis. There was no family history of psoriasis. He had had recurrent severe psoriasis from the age of thirty-

Fig. 1.

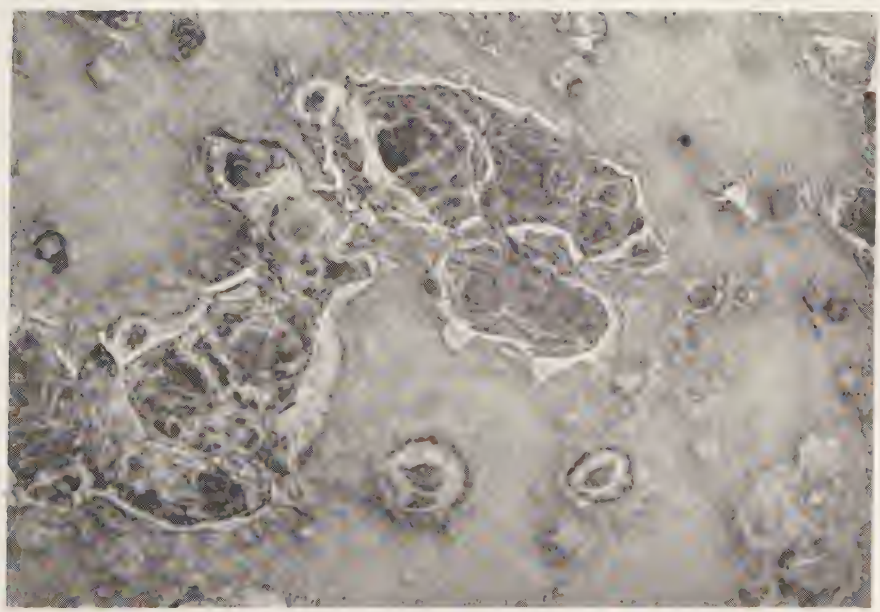

Fig. 2.

four. Three months previously he had developed a rheumatoid type of arthritis which was treated with prednisone, 20 mg. daily, reduced to 7·5 mg. daily after two months. He then suddenly omitted the drug and within a few days developed a mild recurrence of the arthritis and moderately severe exfoliative psoriasis. Biopsy showed the changes of psoriasis. All symptoms were rapidly controlled by prednisone, 20 mg. daily, which was slowly reduced and finally discontinued after four months. Within one week there was a slight relapse of the psoriasis. On readmission there was mild generalized psoriasis but over the face and chest there were a few minute superficial pustules. These rapidly disappeared on a larger dose of steroids but one week later, for no apparent cause, he developed diffuse erythema with multiple superficial sterile pustules on the hands, arms and face. There was some malaise but no fever. After starting tetracycline (1 G daily) there was a rapid improvement within 36 hours. After 6 days, when there was extensive exfoliation of the affected areas, the antibiotic was discontinued but the steroids maintained. Two days later he complained of superficial pain and extreme tenderness over the right ankle. This was followed by a patch of vivid erythema 2 cm. across. After two days, a crop of pustules appeared on this area and an eruption, with an advancing edge of erythema and pustulation and central clearing, spread rapidly to involve both legs below the knees. The remainder of the skin was unchanged but he complained of a severe sore throat. Examination of the palate and pharynx showed a diffuse mottled erythema and multiple pin-head sized sterile pustules. Although there was no fever he felt very ill. This episode also settled very rapidly with a six day course of tetracycline. After a further five days on steroids only, he suddenly developed a high fever (103° F.) during a spell of hot weather. There were no signs of infection. After 48 hours he developed a further crop of pustules, the fourth in one month, but involving only the hands and face. For the next three days he was desperately ill ; then the pustules and fever again slowly settled without antibiotics. The serum calcium remained normal. After a further three months in hospital he was discharged home on a maintenance dose of ACTH and prednisone. After six months he still has moderate erythroderma.

Case 3.

A housewife aged 72. She had one brother with mild psoriasis. She had had psoriasis on the elbows and knees for three years and thickening of her toe nails for eighteen months. Ten months previously the patches on the elbows developed pustules and new lesions appeared elsewhere, with disabling lesions on the fingers. A coronary thrombosis fourteen months previously had left her with oedema and breathlessness on exertion. Otherwise she had always enjoyed good health.

Examination showed a well preserved woman with chronic congestive cardiac failure. On the elbows, shoulders, sides of the neck and scalp there were plaques 2 to 5 cm. across. These were typically psoriatic except for numerous superficial lakes of pus. On both hypothenar eminences were groups of pustules. The whole of the terminal phalanges of both thumbs and three fingers of the right hand showed gross changes of psoriasis but no pustules. There was mild submammary intertrigo. Biopsy specimens showed the picture of psoriasis with marked infiltration of the epidermis by polymorphs and a large subcorneal abscess. Cultures were sterile.

For eight days treatment with rest in bed and bland local applications produced no change. Pustules were observed to dry up to form scales and a few new pustules appeared from day to day. She then suddenly developed a fever (101° F.) and simultaneously many new pustules appeared on the old lesions. Spreading from these lesions there appeared a faint erythema upon which were minute superficial non-follicular pustules. Over the next three days she became desperately ill and developed bronchopneumonia and cardiac failure. The eruption became generalized, spreading outwards both from the existing lesions and from the previously normal skin in the

flexures. The pustules dried up and separated to leave a glazed red-brown surface while new pustules continued to appear at the periphery to produce characteristic polucyclic lesions. There was no itching but severe burning pain. There were no mycosal lesions and no arthritis. During this three day phase of onset treatment with mersalyl, digitalis and penicillin caused no improvement. Within twenty-four hours of starting tetracycline (1 G daily) there was a most dramatic improvement. When the drug was discontinued after fourteen days her condition was as on admission except that the plaques were no longer pustular. Three days later these again became pustular and a faint erythema with a few pustules appeared on the elbows and neck. There were no signs of infection and no fever. Tetracycline was re-administered and all signs of activity regressed within twenty-four hours.

One month after the acute exacerbation and when she was convalescent, she suddenly died. Autopsy confirmed that acute heart failure was the cause of death. Apart from myocardial fibrosis, early hepatic cirrhosis and chronic cholelithiasis, no abnormality was detected in the internal organs or endocrine glands.

Comment.

The chief interest of these three cases of pustular psoriasis seems to be the morphology of the eruption and the reactions to antibiotic and steroid therapy.

Morphology.

In Case 1 the eruption was obviously psoriatic at all stages. It started and ended in the same way as her many previous attacks except that it was more severe and each small lesion was surmounted by one or more pustules. Only at one stage were there any lesions resembling impetigo herpetiformis. Case 2 was intermediate between the others. Superimposed on an already active psoriatic erythroderma, he developed several episodes of pustulation with polycyclic lesions and systemic disturbance. Case 3 is clearly a typical example of the type of generalized pustular psoriasis described by Zumbusch (1910). Although the pre-existing plaques showed pustules they were clinically and histologically identifiable as psoriasis (psoriasis with pustules).

This gradation between the three cases in their various phases would seem to confirm that the Zumbusch type is indeed only an extreme form of exudative psoriasis, as suggested by Schuppener (1958).

Response to Antibiotics.

Although isolated good results with antibiotics have been reported, most writers have failed to notice any favourable response. Nevertheless, all three of these cases seemed to respond on a total of five occasions and the following possible modes of action are suggested.

(i) A true antibiotic effect on a generalized infection. This is unlikely as bacterial, mycological and virus studies have regularly been reported as negative.

(ii) A true antibiotic effect on a localized infection responsible for a generalized "ide" reaction. The arguments against this are discussed by Lapière (1958).

(iii) A true antibiotic effect on a localized infection producing a non-specific stress reaction. This is considered the most probable explanation although the infection could not be demonstrated on each occasion.

(iv) A non-antibiotic pharmacological action of the drug on human tissues.

(v) Chance association.

Response to Steroid Therapy.

In Cases (i) and (ii) there was a long history of recurrent severe psoriasis but only after steroid therapy did pustular psoriasis develop. The time relations did not suggest that this was a direct toxic effect of the drugs, but that they had adversely affected the course of the disease so that the next relapse was of this far greater severity. The adverse effect of steroids has been reported previously. Localized forms of pustular psoriasis of the Barber type have been converted into intractable generalized pustular eruptions (Hellerström *et al.*, 1953; Prakken, 1957; Calkins *et al.*, 1957) described a similar disastrous change in localized acrodermatitis continua provoked by sudden cessation of steroid therapy. Alt and Many (1953) reported a case of pustular psoriasis which followed steroid therapy for arthropathic psoriasis.

It is recognized that stress in any form may provoke relapse of psoriasis. It is also well known that there may be impairment of the physiological reactions of the body to stress both during and for as much as eighteen months after cessation of prolonged steroid therapy (Bayliss, 1958). On the other hand these drugs may be helpful in the localized forms of pustular psoriasis and may sometimes be apparently life-saving in the immediate treatment of the generalized forms. Their place in the long term management of these conditions is still uncertain. Until this has been clarified it is most important that we should realize that disastrous adverse reactions may occur, especially on sudden withdrawal or with a sudden increase in body needs.

Summary.

Three cases of generalized pustular psoriasis are described and the literature is briefly reviewed.

An apparent favourable response to tetracycline therapy was noted.

Steroid therapy appeared to have a long-term adverse effect in two cases and to have played some part in precipitating simple psoriasis into pustular psoriasis.

I am greatly indebted to Dr. C. H. Whittle and Dr. A. J. Rook, under whose care these patients were treated, for their constant help and encouragement.

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HYPERSENSITIVITY TO HYDROCORTISONE.

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Although hydrocortisone preparations for local application are nowadays used on a large scale, hypersensitivity to pure hydrocortisone seems, so far, to be a rarity. Sams and Smith (1957) described a case of contact dermatitis due to hydrocortisone ointment which, however, proved to be due to the other constituents of the ointment base rather than to the hydrocortisone itself. I can only find one case reported in the available literature of contact dermatitis caused by the hormone hydrocortisone acetate—that recently published by Burckhardt (1959). It seems justifiable, therefore, to report a case which came under my notice.

Case Report.

A garage boy, a non-white, aged 19 years.

In the beginning of July 1958, he developed weeping eczema on his face and hands. In his work he came in contact a lot with thinners, though a patch test with thinners 1 : 4 in oil was negative. He was treated initially with 2% vioform in zinc cream and 10% albucid eye drops. This was followed after a few weeks by applications of a 0·5% neomycin ointment around the eyes. The condition improved but relapsed after ten days and became worse than before. Neo-cortef 1% ointment containing hydrocortisone acetate and neomycin sulphate was then applied to the skin round the eyes and this was again followed by an improvement. About ten days later the condition worsened and a 1% hydrocortisone ointment was tried, but the skin condition became even worse. Treatment was then changed to dressings of aluminium acetate and calamine lotion and this was followed by immediate improvement so that the patient was able to resume his work towards the end of September. In March 1959, he came back with a recurrence of eczema of the face and hands; this was treated with aluminium acetate lotion and zinc cream with 2% vioform with good results.

As the history pointed to the possibility of hypersensitivity to neomycin, hydrocortisone or the constituents of the ointment bases, a number of patch tests were done. Because it was difficult to obtain the various constituents of the ointment bases used, the patch tests with antibiotics were carried out with the antibiotics mixed in paraffinum molle. Several brands of hydrocortisone preparations from different firms, as well as related compounds and finally, a pure solution of hydrocortisone succinate in water were tested. The patch tests remained in place for 48 hours and were read then and again at 72 hours.

Discussion.

The case showed positive patch test results with several brands of hydrocortisone preparations and to a pure solution of hydrocortisone succinate in

Results of Patch Tests.

Hydrocortisone and related compounds :

Hydrocortistab lotion 0·5% (Boots)	+
Hydrocortistab ointment 1% (Boots)	+
Ef-Cortelan ointment 1% (Glaxo)	+
Hydro-Adreson ointment (Organon) containing 5 mg. hydrocortisone acetate + 150 mg. sodium sulphacetamide per gram	+
Sulphacetamide solution 10%	—
Hydrocortisyl ointment 1% (Roussel)	+
Solucortef 6% (Squibb) containing hydrocortisone sodium succinate in sterile water	++
Solucortef 1%	+
Meti-Derm cream 0·5% (Schering) containing prednisolone	+
Kenacort-A ointment (Squibb Triamcinolone Acetonide) : containing the acetonide of 9-alpha-fluoro-16-alpha-hydroxy-prednisolone, concentration not stated.	—
Cortone acetate 1·5% (Merck) containing cortisone acetate	—
Guttae cortisone 0·5% (Organon) containing a micro-crystalline suspension of synthetic cortisone acetate	—

Antibiotics in paraffinum molle :

Neomycin 3%	+++
Chloromycetin 6%	++
Chloromycetin 3%	—
Achromycin 6%	+
Achromycin 3%	—
Aureomycin 6%	—
Streptomycin in water 25%	—

Combined preparations :

Codelsol lotion 0·5% (Merck, Sharp and Dohme) with neomycin, containing prednisolone—21 phosphate and neomycin sulphate	++
Neo-Cortef 1% ointment (Upjohn) containing hydrocortisone acetate and neomycin sulphate	+ -
Florinef with Graneodin ointment (Squibb) containing 0·1% fludrocortisone acetate combined with 2·5 mg. neomycin and 0·25 mg. gramicidin per gram of Plasti-base	—

water. Patch tests with the 6% hydrocortisone succinate solution were negative in control subjects. It can be assumed therefore that in this case we are dealing with hypersensitivity to a pure hydrocortisone compound. The patch test with 0·5% prednisolone cream was also positive whilst the patch tests with cortisone and triamcinolone preparations were negative in the concentrations used. My case differs from Burckhardt's in that in his case a patch test with a 5 mg. tablet of Ultracorten H (prednisolone, Ciba) was negative. In addition my case showed positive patch tests to neomycin, chloromycetin and achromycin in empirical concentrations. The persistence of the reaction to the patch test with neomycin for at least 28 days is noteworthy : such persistence has already been noticed by others. A patch test to a neomycin ointment in Burck-

hardt's case was negative. The pattern of sensitization in Burckhardt's case differs from that in mine perhaps because of differences in concentration of the test substances, but more probably because of personal factors. Each patient has his own pattern of reaction as was shown by Kooij and Van Vloten (1952), among others, in epidermal sensitization to sulphonamides. Burckhardt's patient with eczema of the ear was under treatment with an ointment containing hydrocortisone and neomycin for about two years before the hypersensitivity to hydrocortisone developed : in my case it developed in a matter of a few weeks.

Summary.

A case of hypersensitivity to pure hydrocortisone compounds is described with cross-sensitization to prednisolone. Patch tests with cortisone preparations and with a triamcinolone ointment were negative. In addition the patient was hypersensitive to neomycin and showed positive patch tests to chloromycetin and achromycin.

I am indebted to Dr. R. Lang, Head of the Department of Dermatology, Groote Schuur Hospital, Cape Town, for permission to publish these notes on a patient in his ward.

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BRITISH ASSOCIATION OF DERMATOLOGY

The Thirty-ninth Annual Meeting.

The Thirty-ninth Annual Meeting of the British Association of Dermatology was held in Glasgow on 9, 10 and 11 July, 1959, under the Presidency of Dr. J. Ferguson Smith and Vice-Presidency of Dr. James Sommerville.

At the Annual Business meeting on Thursday, 9 July, it was decided that the next Annual Meeting should take place in London on 7, 8 and 9 July, 1960, under the Presidency of Dr. Louis Forman and the Vice-Presidency of Dr. G. W. Bamber. The following were elected to serve on the Executive Committee for 1959-1960 :

President :	Dr. L. Forman.
Immediate Past President :	Dr. J. Ferguson Smith.
Vice-President and Hon. Assistant Editor :	Dr. G. W. Bamber.
Hon. Treasurer :	Sir Archibald Gray.
Hon. Secretary :	Dr. H. J. Wallace.
Hon. Editor :	Dr. P. J. Hare.

Members of Committee :

Dr. T. E. Anderson.	Dr. G. A. Hodgson.	Dr. R. P. Warin.
Dr. F. R. Bettley.	Prof. J. T. Ingram.	Dr. G. C. Wells.
Dr. P. F. Borrie.	Dr. R. M. B. MacKenna.	Dr. D. S. Wilkinson.

Prof. A. M. Memmesheimer was elected to Honorary Foreign Membership and the following to Ordinary Membership :

Dr. I. Anderson.	Dr. I. Hodgson-Jones.	Dr. R. H. Marten.
Dr. E. A. Fairburn.	Dr. A. Lawton.	Dr. D. Sharvill.
Dr. M. Hewitt.	Dr. W. B. McKenna.	Dr. P. A. J. Smith.

Notice was received of the election of new Members of Australian branches of the Association :

New South Wales :	Dr. M. B. Lewis.
Victoria :	Dr. J. England.
	Dr. B. R. Entwistle.
	Dr. R. Langley.
	Dr. R. Strang.
	Dr. E. Taft.

The meeting acclaimed Sir Archibald Gray who was granted the Honour of Knight Commander of the Victorian Order in the Queen's Birthday List. It paid respect to the memories of the late Dr. W. Herbert Brown, an Original Member of the Association and the late Prof. Erich Hoffmann, who was made an Honorary Foreign Member in 1952.

The scientific programme began with a series of papers on malignant disease of the face and mouth. A sound pathological basis was laid by Prof. D. F. Cappell, who expressed the view that the histological picture of keratoacanthoma was not as stereotyped as some people taught. Dr. A. A. Charteris and Mr. J. Scott Tough then impressed the meeting with displays of the technical prestidigitations of the radiotherapist and plastic surgeon respectively. Dr. R. P. Warin presented a paper from which it must be concluded that oral lichen planus cannot be complacently ignored as it may lead to carcinoma.

The afternoon brought up-to-date news of griseofulvin from Dr. J. E. Gentles and Dr. D. I. Williams. The toxicity of the drug seems remarkably low. It is highly effective, but optimum dosage has yet to be determined. Dr. A. Girdwood Ferguson reported his work with Dr. W. A. Dewar on the detection of arsenic in skin diseases by the technique of radioactivation analysis: their results were largely negative and contradicted those recently published by Dr. A. Scott in this Journal. Dr. R. Workman Carslaw reported three cases of the spontaneous disappearance of pseudotuberculoma silicoticum.

Friday morning was devoted to a symposium on steroid treatment, beginning with the reports of a team from the Department of Medicine of Glasgow University. Prof. E. J. Wayne described the main actions of the compounds in general and the particular properties of the more recently introduced drugs. Dr. R. L. Richards spoke on the use of steroids in "collagen disease" and Dr. B. E. C. Nordin presented a useful review of the side effects of their administration. Dr. A. Goldberg related his experience of their use in treating cases of haemolytic anaemia. Dr. I. C. Laymont read a paper on the results of systemic treatment of cases of atopic eczema with corticosteroids, and Dr. W. A. Dewar described an investigation of the effects of such therapy on these patients' adrenal function. Dr. C. J. Stevenson reported a survey of cases of bullous diseases treated with steroids in the London teaching hospitals. Dr. I. B. Sneddon returned to the topic of Besnier's prurigo in the treatment of which he felt that steroids held a limited but useful place. During the scientific sessions, an exhibition was held in an adjoining laboratory, demonstrating the skill and artistry of the clinical and microscopical photography of Mr. J. M. McCorquodale, photographer to Dr. James Somerville's unit. On Saturday morning, a clinical case meeting was held at the Southern General Infirmary, at which visitors were impressed by the sight of groups of cases of such Scottish specialities as infantile dermatitis herpetiformis and multiple self-healing epithelioma.

The President held a reception at the historic Royal Faculty of Physicians and Surgeons. This was followed by a civic reception by the Lord Provost of the City of Glasgow in the marmoreal splendour of the City Chambers. The annual golf match was won by Dr. Reginald Hall at the Pollock Golf Club. A cup presented by Dr. Bowers and Dr. Sneddon for an annual yacht race was appropriately won by the former, with Mrs. Bowers as crew, in a race organized through the courtesy of the Royal Northern Yacht Club. The less athletic were transported by bus to the Trossachs Hotel for tea, along sunny lanes well seeded with apoplectic pipers. The annual dinner was held at the Central Hotel where the toast of the Society, coupled with the name of the President was proposed by Mr. Scott Tough. Dr. R. M. B. MacKenna toasted the Guests, for whom Dr. Tom Honeyman replied.

The Society is indebted to the President, Vice-President and their Local Secretary, Dr. W. B. McKenna for their arrangements for a meeting not the least remarkable feature of which was the success of the Vice-President's ambition to see proceedings began punctually at 9 a.m.

NORTH OF ENGLAND DERMATOLOGICAL SOCIETY

Meeting held at Manchester, May 1959.

Argyria.—Dr. P. B. Mumford.

A 40 year old white man began to notice darkening of the skin on his face and neck in October, 1955. The pigmentation increased in severity but is now stationary, although he considers that the colour deepens during the summer months. For four months from May to September, 1955, he had attended a Royal Ordnance Factory as an Inspector of naval shells. These shells were being marked with a solution of silver nitrate (1 lb. silver nitrate in 80 ounces of water).

Examination shows a dusky, greyish discolouration of his face, neck, scalp and ears limited sharply by the collar line. Some pigmentation is also visible on the buccal mucosa, beneath the proximal half of several finger nails and in the skin just proximal to the cuticles of both first toes.

Biopsy shows many minute spherical particles of uniform size in the dermis and especially around the sweat tubules. Under dark ground illumination the granules are easily visible as brilliantly refractile white particles. Some increase in melanin is seen in the basal layer of the epidermis.

Dermatomyositis with Bronchial Neoplasm.—Dr. J. G. Coburn.

Male.—Aged 54 years.

Occupation.—Motor driver.

History.—Four months ago patient noticed a rash appearing on the backs of the hands, face and patellar regions. Coincident with this he complained of muscular weakness and stiffness particularly affecting the thighs with loss of appetite and a general feeling of lethargy. Since then the rash has become distinctly erythematous but oedema of the eyelids is only slight. The itching was mainly confined to the forehead and scalp.

During the last two months he has developed dyspnoea on effort and a cough with occasional sputum. Dysphagia has been absent and there have been no alimentary signs. He smokes 60 cigarettes daily.

Previous medical history.—Left orchidectomy at 12 years. Otherwise nothing relevant.

Family history.—Nil of note.

Examination.—On the face the erythema was concentrated on the forehead and cheeks with very slight oedema of the eyelids. The backs of the hands and elbow regions were also erythematous and there were similar, rather well defined, areas on both knees. The thighs and forearm musculature were very tender.

The heart and lungs appeared normal on clinical examination and there was no lymph gland enlargement. No clinical evidence of a primary growth was found.

Investigations.—A roentgenogram of the chest showed a well circumscribed circular shadow in the lower part of the right upper lobe with enlargement of the associated hilar glands.

Urine.—No abnormality on routine testing. Creatinine in 24-hour specimen 1·277 g. Creatine nil.

Blood count.—Haemoglobin, 98%. R.B.C.'s, 4·7 m. per cu.mm. W.B.C.'s, 4,800 per cu.mm. Colour index, 1·03.

Skin biopsy. –This showed some epidermal atrophy with liquefaction degeneration of the basal layer and scattered fibrinoid clumps in the upper cutis. The latter showed considerable oedema.

Muscle biopsy was not performed.

Further roentgenographic studies revealed another tumour in the right upper lobe and the Thoracic Surgery Unit have removed the right upper lobe and the apical segment of the right lower lobe. Histological examination showed that both of these were squamous carcinomata. Since their removal the erythema has improved slightly.

Case for Diagnosis.—Dr. R. H. Seville.

Mr. W. H. W—, aged 58 years.

History.—Itchy rash arms and legs 27 years ago. Nodular lesion left shin developing three years later. Subsequently warty lesions appeared on the other leg, forearms and hands ; no response to anti-pruritic pastes or X-rays at Skin Hospital where he was considered to be a case of hypertrophic lichen planus. Similar findings were noted by Dr. Cliff nine years ago. Two years later his doctor referred him to the Radium Institute where a biopsy taken from the left leg was reported as squamous carcinoma : 5000 r. Ra mould produced little change but so much pain that patient requested amputation. No evidence of malignancy noted in glands from block dissection from groin. Several areas were grafted six years ago including the back of the right hand and forearm where the lesion has re-appeared. These areas have been ulcerated and painful for two years and this is now his main complaint. The skin always smarts when he exposes himself to sunshine. None of the lesions has ever healed spontaneously and the family history is negative. He has been treated with " bitter medicine " on many occasions.

On examination.—There are violaceous hypertrophic areas on the backs of the hands and fingers, ulcerated in places and also on leg, knees and amputation stump. No lichen planus seen on penis or mucous membranes of the mouth. There is a faint erythematous eruption on the cheeks and at the bases of the nails.

Histology.—" All sections submitted show the same histological features. The common factor is the marked irregular verrucous hyperplasia of the epidermis with a nonspecific inflammatory reaction. The original biopsy from the leg and the section after amputation show additional suggestive changes. The first exhibits features one may see in molluscum sebaceum, self-healing squamous cell epithelioma or papillomatosis cutis carcinoides. These findings could easily pass as a low grade squamous cell epithelioma. The second section I think looks like a straightforward squamous cell epithelioma. Histologically the case could easily fit into Ferguson Smith's condition but for the lack of ' self healing ' tendency. It is not lichen planus, nor do I believe that it could be lupus erythematosus. It could be perhaps a low grade infection of the cutis with an abnormal reaction of the epidermis leading to the pseudoepitheliomatous downgrowth. A trial with antibiotics would be interesting."—(H. Haber.)

Comment.—The case was presented for diagnosis, a differential diagnosis being listed as multiple primary carcinomata of Ferguson Smith type, or hypertrophic lichen planus. Drs. Sneddon and Wertheim made the suggestion that lupus erythematosus tumidus be included.

Postscript.—The lesions have not changed following ten weeks' treatment with Chloroquin Sulphate 200 mg. twice daily. As Milne (1954) has reported that one case finally metastasized the patient will shortly be referred for further plastic surgery.

Reference.

Milne, J. A., personal communication reported in Ormsby and Montgomery's textbook for *Diseases of the Skin* (1954), VIIIth Edition. Henry Kimpton.

Meeting held at Huddersfield, March 10th, 1959.

Apocrine Acne.—Dr. Clifford Stuart.

Two female patients were presented, each with a family history of the condition.

Case No. 1.

M. S—. A married woman, aged 31 years.

Since the age of nine she has suffered from "boils" of the perianal region and groins.

On examination.—There were numerous scars of the posterior natal cleft and groins with comedones and areas of pigmentation. There were similar lesions but no pigmentation in both axillae and one comedone in the right antecubital fossa.

Family history.—Her maternal grandmother suffered from boils of the buttocks. Two sisters of the patient suffer from the same condition, and one sister and a brother suffer from acne vulgaris of the back and neck. Two siblings are not affected.

Case No. 2.

B. H—. A single woman, aged 24 years.

History.—Acne vulgaris of the shoulders and back since the age of twelve. Since the age of fifteen she has had "boils" of the axillae and inner thighs.

On examination.—She has a cystic acne of the back and shoulders with a little on the face. The axillae show comedones and pitted scars. The groins are similar except that there is some patchy brown pigmentation in addition. There were comedones and pinhead sized pits in both ante-cubital fossae. Retention cysts have appeared on most of the affected areas from time to time and have been removed. The scalp hair has always been fine and sparse. It is getting thinner and she now wears a wig. The hair condition may be pili torti.

Family history.—Her mother suffers from abscesses of the perianal area and of the buttocks. The maternal grandfather was probably affected. The patient's brother suffers from dissecting perifolliculitis of the neck and scalp. Two other siblings are normal. The members of the family who have acne have hair resembling the patient's.

Comment.—It is suggested that apocrine acne, acne conglobata and perifolliculitis abscedens et suffodiens capitis have a common aetiological factor which is genetically determined. In addition to the areas in which these lesions are usually described, many of these patients have comedones in the antecubital fossae.

***Trichophyton rubrum* Infection of Multiple Nails Treated with Oral Griseofulvin.**—Dr. A. J. E. Barlow.

Mrs. A. P—, aged 38 years. Housewife.

History.—For the last ten years this patient has had a chronic infection of all toe nails, and finger nails on the left hand. As a result of previous treatment palmar and plantar infection has been cleared.

Progress.—This patient was given Griseofulvin 2 g. daily for 3 days during which time she developed severe headache and general malaise. Her absolute polymorph count fell from 8,200 to 2,400. Treatment was stopped after 3 days, her symptoms clearing during the following week. She was then given 2 g. daily again with immediate recurrence of symptoms and a fall in her absolute polymorph count from 6,400 to 2,800. This dosage was continued for 7 days and then reduced to 1 g. daily for 3 days when treatment was stopped because of an increase in her symptoms and because she fainted on 2 occasions. Her polymorph count showed a wide variation between 2,200 and 5,000 but did not fall below the former figure.

Postscript.—May, 1959. This patient was given Griseofulvin again as an in-patient without any recurrence of the symptoms and without any significant alteration in her blood count.

***Trichophyton rubrum* Infection of Smooth Skin and Nails Treated with Oral Griseofulvin.**—Dr. A. J. E. Barlow.

Mr. J. J—, aged 35 years. Flour miller.

History.—For the last 12 years this patient has had a chronic *Trichophyton rubrum* infection of all nails and the smooth skin of the trunk and limbs. He has been under the care of Dr. Sneddon and Dr. Church, who very kindly referred him so that he could be treated with Griseofulvin.

Clinical examination.—Before treatment all finger and toe nails were friable and broken and there was extensive branny scaling erythema on the trunk and limbs and face. Fungus could be demonstrated in all sites and cultures grew *Trichophyton rubrum*.

Treatment.—Griseofulvin 2 g. daily for two weeks followed by 1 g. daily for 5 weeks at the end of which time treatment was stopped because he developed erythema and oedema of his face.

Progress.—Itching disappeared 2 days after starting treatment, and scaling of the smooth skin disappeared in 2 weeks. After 5 weeks hyperkeratosis of palms and soles was less evident and scrapings from these sites became negative. His finger nails showed some clinical improvement but there has been no significant change in the toe nails.

Postscript.—Four months after stopping treatment, several of his finger and toe nails show clinical improvement but fungus is still present. Areas of branny scaling in which fungus is present have developed on his right arm and right leg but the rest of the skin remains clear.

Behçet's Syndrome with Neurological Involvement.—Dr. C. E. Stuart and Dr. G. K. Hargreaves.

A female, aged 34 years.

History.—Recurrent ulceration of the mouth and vulva for five years. Since August headaches mainly occipital radiating forward, also at times associated with vomiting. In December transient diplopia.

Examination.—Small ulcers on buccal mucosa; larger ulcers on labia majora and perineum. C.N.S. examination in December showed early bilateral papilloedema and diplopia on looking to the right but no demonstrable ocular palsy. The papilloedema quickly increased and she developed haemorrhages and exudates in both fundi. There were no other abnormal signs. B.P. 140/90.

Investigations.—Lumbar puncture. Pressure 180 mm. of water. Protein 16·4 mg.%. Lange normal curve. W.R. negative. Cytology normal. Air encephalogram and myadil ventriculogram showed no significant abnormality.

Progress.—The headaches and double vision disappeared in January, but double vision has recurred. The haemorrhages and exudates have gone and the papilloedema has subsided.

Treatment.—Buccal and genital ulceration suppressed temporarily with Prednisone before onset of neurological symptoms.

Maffucci's Syndrome (Dyschondroplasia with Haemangiomata).—Dr. C. E. Stuart.

A male, aged 26 years.

History.—At about 3 days some abnormality of right middle finger and left forearm noticed but mother vague about it.

At about 8 years left hand filled up while dependent but returned to normal on elevation.

At about 10 years arm in plaster for about five weeks after a fall.

At about 15 years noticed " lumps " over his left forearm and finger and the right right hand got bigger.

At about 21 years laparotomy at Kildare County Hospital for appendicitis. Blood found in peritoneal cavity due to rupture of angioma of intestine. Intestine found to be studded with angiomata.

At about 22 years investigated at Meath Hospital for recurrent haematuria. Later investigated in the Genito-Urinary Department at Leeds General Infirmary for haematuria.

Pyelograms : Left kidney normal.

Right kidney : Lower calyces not clearly defined, thought to indicate some infection.

Aortogram was performed to see if it revealed an angioma but nothing abnormal was detected.

Family history.—None relevant.

On examination.—Clinically a typical Maffucci's syndrome. There was some doubt about the interpretation of the skiagrams but an orthopaedic surgeon saw the patient and was satisfied that the bone condition is dyschondroplasia. The spleen has been palpated and skiagrams confirm it is enlarged.

Investigations.—W.R. negative. Numerous other investigations carried out.

Comment.—Twenty cases have been described up to October 1942 and a few have been described since. As far as I know no case has been described with associated visceral angiomata though such an association is to be expected.

There is reason to believe that a diagnosis was not made in this case until he was admitted to Dewsbury.

Porokeratosis of Mantoux.—Dr. S. T. Anning and Dr. G. K. Hargreaves.

Girl, aged 17 years.

History.—Onset of hyperkeratosis of palmar aspect middle fingers when aged 6, Gradual extension over palms and other fingers. Thickening over soles and heels was noted three months ago. Hyperidrosis hands and feet for many years. Family history, negative.

Examination.—Yellowish brown thickening of both palms and volar aspect fingers, but sparing left thumb, little finger and part of ring finger.

Hands and feet hyperidrotic.

Hyperkeratosis of heels. Lividity of soles with punctate keratoderma and maceration of anterior parts.

Investigations.—No fungus demonstrated.

Treatment.—Probanthine. Sodium hexametaphosphate solution to control hyperidrosis.

SOUTH WEST OF ENGLAND AND WALES SOCIETY OF DERMATOLOGY

Meeting held at Bristol on February 21st, 1959.

Benign Acanthosis Nigricans.—Dr. L. G. Tulloch for Dr. Robert Warin.

Misses A. S. D— and J. M. D— (dissimilar twin girls), aged 6 years.

History.—Dryness and thickening of the skin in the groins appeared in both about the age of one year. This gradually increased and appeared later in other areas. A rate of spread of some 4–5 inches in the last year has been noted on the lower abdomen.

The general health of both girls is excellent.

Family history.—No similar condition or significant abnormality is known.

Examination.—The skin in the affected areas varies from slate grey to dark brown : it is thickened with a velvety feel and in some places a slightly warty surface.

In both cases the changes involve the abdomen, groins, lumbar sacral area, anterior axillary folds and lateral aspects of the ankles. In one twin however, the lesions are more marked and include also the posterior axillary folds, buttocks, antecubital fossae, fronts of wrists and dorsa of feet.

Histology.—Hyperkeratosis, papillomatosis and slight acanthosis. No excessive melanin.

Comment.—The condition is unlikely to be one of malignant acanthosis nigricans as this condition most commonly begins in adult life whereas the benign type is present at birth or begins during childhood. Also a familial tendency is common in the benign but has not been described in the malignant type (Curth and Ascher, 1959). The condition of these two girls is likely to worsen particularly at puberty, after which it will probably remain stationary or regress.

Reference

Curth, H. O. and Ascher, B. M. (1959) *Arch. Derm., Chicago,* **79**, 55.

Multiple Acquired Haemangiomata.—Dr. Robert Warin.

Mrs. A. L. V—, aged 38 years. Housewife.

History.—Nine months ago small red spots were noticed and continued to appear for 3–4 months. During the last 2–3 months many have faded. There has been no upset of her general health and menstruation is normal.

Family history.—No similar condition has occurred in her family.

Examination.—Numerous, 1–5 mm. diameter, bright red papules are present chiefly over the upper trunk, upper arms and thighs.

B.P. 120/80. Urine N.A.D.

Histology.—Typical appearance of a haemangioma.

Comment.—The patient appears to have a similar condition to the woman shown by Dr. E. Cronin for Dr. H. J. Wallace at the Royal Society of Medicine (Dermatological Section) Meeting in December 1958.

Erythema Multiforme and Mouth Ulceration.—Dr. L. G. Tulloch for Dr. Robert Warin.

Mr. A. P—, aged 44 years. Postman.

History.—For the past 5–6 years this patient has had recurrent attacks of ulceration of the tongue and buccal mucous membrane. He has been under our observa-

tion for the past $2\frac{1}{2}$ years, and has rarely been free from ulcers varying in number up to 20. The ulcers range in size from 2 10 mm. in diameter; some are superficial and some deep; they are painful.

Eighteen months ago a blotchy eruption developed over the shins and forearms which had the appearances of erythema multiforme, with at times bullae and "target" lesions. This cleared in a few weeks, but has recurred some six times.

Examination.—Mouth now clear but a blotchy eruption is present over both shins.

Investigations.—Blood cytology and X-ray chest N.A.D.

Treatment.—During the last year he has been on Prednisone in a dose varying from 10 20 mg. per day. The mouth ulceration has been much less, but relapses when the dose is reduced. The blotchy eruption does not appear to be influenced.

CORRESPONDENCE.

The Editor, 'The British Journal of Dermatology',
85 Harley Street, London, W.1, England.

Dear Sir,—In the March 1959 edition of your journal Dr. A. Jarrett, in an article which commences on page 102, has made certain remarks and assumptions on the effects of progesterone in the treatment of acne vulgaris.

As he has cited my results specifically (in addition to Newman and Feldman 1954) with regard to clinical results obtained by the use of progesterone for acne vulgaris I would be grateful if you would publish the following reply :

To commence, and I realise this is probably a typographical error, he has quoted me from *The Australian Journal of Dermatology* 1951 on page 102 and also in the references on page 116 when the correct date (which he has on page 113) is 1952. Dr. Jarrett states on page 102 " Belisario (1951) treated thirty cases of acne with parenteral progesterone in a dose of 5 mg. weekly. He reported good results in 67% after an average period of $3\frac{1}{2}$ months treatment." This referred to 30 cases treated by the intramuscular injection of 8 mg. progesterone weekly up to an average of 15 weeks.

He goes on to cite 6 cases (2 males and 4 females) in which progesterone was given by him in a dose of 25 mg. intramuscularly, daily up to from 10 to 17 days during which time only one patient became worse and the rest remained unchanged.

Dr. Jarrett makes the following statement on page 113 of the March 1959 edition of *The British Journal of Dermatology:* "clinically, there was no indication that progesterone caused any deterioration in the condition of acne patients, nor was there any sign of improvement in the patients so treated. This fails to confirm the good results reported from the use of this hormone by Belisario (1952) and Newman and Feldman (1954)."

May I be permitted through your Journal, Mr. Editor, to draw Dr. Jarrett's attention to the following ?—

(1) Newman and Feldman treated a group of 95 patients with what they described as " adult premenstrual acne consisting of papules, nodules and/or cystic lesions developing without pre-existing comedones." Progesterone was given intramuscularly in doses of 10 mg. before the onset of menstruation and 5 mg., five days following menstruation. Buccal tablets of 10 mg. were substituted in a number of cases being given daily for 10 days preceding the menses. They found this treatment continued over periods varying from 5 to 20 months, was effective in preventing or controlling the condition (which was not a true acne owing to the absence of comedones—the writer).

(2) Zeligman and Hubener (1957, *Arch. Derm.*, **76** : 652) administered progesterone intramuscularly in daily doses of 50 mg. for period up to 12 weeks in normal women without acne. In 10 of 11 subjects so treated, acne developed due to the injections. This artificially produced acne improved or cleared up 6 weeks after cessation of progesterone injections.

(3) Dr. Jarrett bases his statement on a series of 6 patients only, treated for a period of 10 to 17 days, whereas my cases were treated over 15 weeks.

(4) Since my paper in *The Australian Journal of Dermatology* was written, I have treated many more cases of acne with progesterone with marked benefit and often cure. I still revert to this form of therapy in resistant cases, and over the last few years have been injecting the " Long-acting " preparation Prolution C, 65 mg. once monthly, up to an average of 6 months.

(5) In the latter respect, I would refer Dr. Jarrett to an article in *The Journal of Investigative Dermatology* 1958, **31**, 247, by Kenneth O. Baker. He obtained uniformly favourable response in 76 women with monthly intramuscular injections, over 2 to 8 months, of a long-acting progesterone steroid, 17-alpha-hydroxyprogesterone caproate (Delalutin-Squibb).

(6) I have found over a number of years now, that large doses of progesterone, particularly at close intervals, will aggravate almost all cases of acne, whereas small weekly doses (5 mg.) or monthly doses of long-acting progesterone produce improvement in a large number of cases. A survey of the literature on the subject, will reveal similar findings.

(7) Finally, in view of the foregoing remarks, it would appear that the reason Dr. Jarrett's experiments failed to confirm the " good results " reported from the use of progesterone by Newman and Feldman and by me, will be found in the size of the dose (25 mg.), the short intervals (daily) and the short overall period of administration (10–17 days) employed by Dr. Jarrett. With his reported method of administration, significant conclusions cannot be drawn concerning the therapeutic efficiency of progesterone in acne vulgaris.

Yours sincerely,

Harley, 143 Macquarie Street, Sydney. J. C. Belisario.
13th May, 1959.

Dr. Jarrett answers : Dr. Belisario's comments indicate that some aspects of the paper have escaped his notice. This investigation dealt not only with clinical observations on patients, but also compared the effects of three hormones on the sebaceous glands. Two of these had definite effects both on the clinical state, and on the sebaceous glands of acne patients. Stilboestrol significantly reduced the surface sebum and improved acne, whereas testosterone significantly increased the surface sebum and caused deterioration of acne lesions. We therefore had reason to conclude that substances that improved acne would reduce the sebaceous glandular activity, and conversely substances that increased this activity would worsen acne. Against the background of these two active hormones, progesterone was tested on an equal basis ; it was given for the same period and in the same dose as testosterone. It however failed to alter the surface sebum significantly, or to influence the clinical state of acne either for better or worse. It was therefore considered that in the dosage used, and compared with testosterone and stilboestrol this hormone was entirely without effect.

The criticism that the period of treatment was short is certainly not valid as stilboestrol and testosterone exerted both their clinical and sebaceous effects in a short time. The short period was deliberately chosen as it is well known that acne runs a fluctuating course, and therefore unless a therapeutic agent is capable in influencing the clinical state in a short time its value cannot be assessed. Any conclusions regarding therapeutic responses that extend beyond a period of four weeks observation cannot be accepted as scientifically proven ; these are at best only clinical impressions.

Dr. Belisario suggests that progesterone aggravates acne if given in large, frequent doses, but improves this condition in small infrequent doses. I am therefore at a loss to understand whether I have not given my patients enough to make them worse, or too much to make them better. I suspect that if the " progesterone-patient titration " is as precise as he implies the truth is that progesterone has no effect whatsoever.

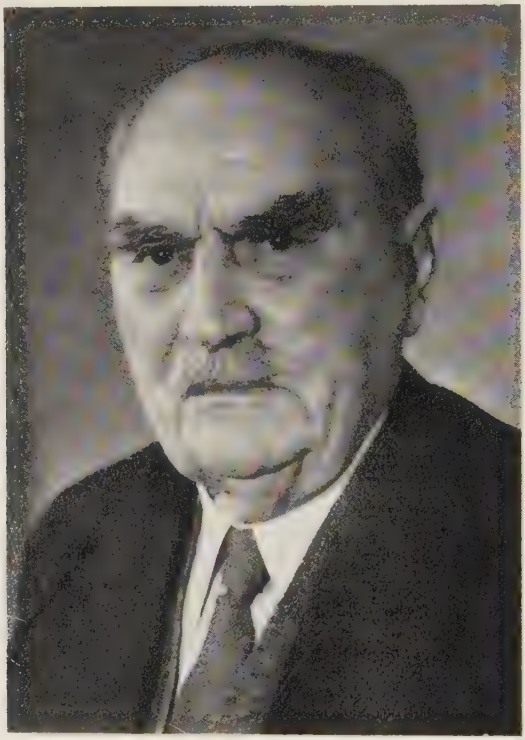
CORRECTION.

In a paper by C. D. Calnan and I. Sarkany on " Contact Dermatitis from Neomycin " in the December, 1958 issue of this Journal (*Brit. J. Derm.*, 1958, **70**, 435) it was implied that a preparation called " Hydroderm " was made by Boots. A correction slip was inserted in the issue of May 1959, stating that it was made by Upjohn of England. This is also erroneous and the manufacturers wish it to be clearly stated that " Hydroderm " is made by Merck, Sharp and Dohme Ltd. The editor regrets these misstatements and apologizes to Messrs. Merck, Sharp and Dohme Ltd., Upjohn of England and Boots Pure Drug Co. Ltd. for any inconvenience resulting from them.

OBITUARY

Erich Hoffmann.

The news of the death of Erich Hoffman was not entirely unexpected. After a very full life, he died peacefully of a heart attack on 13 May, 1959, at the age of 92. Thus came to a close the career of the research worker which culminated in his collaboration with Fritz Schaudinn, who first demonstrated the cause of syphilis in Hoffmann's preparations.



Erich Hoffmann.

Erich Hoffmann, the son of a clergyman, was born in Witznitz in Pomerania on 25 April, 1868. His scientific career sprang from his love of Nature allied to an acute power of observation. He had besides to a rare extent that gift of perceiving significant associations and of following up paths of evidence that has distinguished so many great research workers. His share in the discovery of *Treponema pallidum* is typical of this gift. When, despite all efforts, work with the methods of the new bacteriological era seemed in vain, it occurred to Hoffmann that a protozoon might be responsible for syphilis. In 1901 he decided to visit Schaudinn's department of protozoology to familiarize himself with the special methods which went beyond the range of Koch's bacteriology. (He was then a *Stabsarzt*.) He soon placed before Schaudinn preparations of primary and secondary syphilis stained with an

aniline dye then in use. Schaudinn, however, was unable to find the organism in these preparations. Hoffmann continued his search over the ensuing years, employing a multitude of methods. He did not succeed, but his work was not in vain. He developed such subtle techniques of preparation and examination that Schaudinn, on 3 March, 1905, in the Women's Section of the Dermatological Clinic of the Charité, Berlin, was able to demonstrate spirochaetes in one of Hoffmann's slides. This finding was confirmed in all the subsequently examined preparations, with the result that a joint paper by Hoffmann and Schaudinn appeared as early as 4 April, 1905. Hoffmann was able actively to participate in the full exploitation of this discovery, including the chemotherapy soon to be invented by Ehrlich. His Bonn treatment (*Bonner Kursystem*) authoritative in the days before penicillin, provides significant testimony.

In addition to those on venereology, Hoffmann wrote over one hundred dermatological papers. His acute diagnostic insight allied with intuition places him with Arndt and Jadassohn—to mention only German colleagues—in the first rank of outstandingly able clinicians. All his papers show proof of his profound knowledge of histology and of the clinical and bibliographical ramifications of the numerous diseases on which he worked, many of which were first described by him, e.g. erythema nodosum syphiliticum, dermatofibrosarcoma protuberans, folliculitis capitis suffodiens et abscedens, lichen pyodermicus, war melanoses).

His enquiring intellect kept his love of dermatology alive and productive right up to his death. Even his premature retirement from his clinic, enforced during the Nazi era, only made it more difficult for him to continue his scientific work, but failed to end it. Between his eightieth and ninetieth years, he published no fewer then twenty papers, the last in honour of Prof. Flarer (" *Über Naevo- und Onkogenetik mit Bemerkungen über Iatrophilosophie* "). Well over three hundred and fifty publications, a following of some seventy university teachers and hospital physicians and a multitude of specialists in Germany and all over the world provide testimony of the exceptional radiation of his academic influence. His work will never perish.

H. Th. Schreus, Düsseldorf.

CURRENT LITERATURE

AFTER-CARE OF SKIN CANCER. Adrian Johnson and John E. Cramer. (1957) *Austral. J. Derm.*, **4**, 33.

0·1% Fluorohydrocortisone in an emulsifying ointment base was applied to the treated area during and after superficial radiotherapy for basal or squamous celled carcinomas: 30 cases were so treated and compared with 18 controls. The X-ray reaction was thought to be somewhat reduced in the treated cases, but the authors do not commend this treatment because of the danger of infection.

The short term follow-up did not show any difference between the series, all results being satisfactory.

The dose used was fractionated, total 3 to 5000 r approximately, H.V.L. 1·8 mms. Al.

R. E. B.

A CASE OF SYMBIOTIC GANGRENE. W. W. Gunther. (1957) *Austral. J. Derm.*, **4**, 55.

The remarkable thing about this case of extensive ulceration of the skin is that it appeared to respond rapidly to cortisone after antibiotics had failed. R. E. B.

FIRST EXPERIMENT WITH THE USE OF "EPILIN" IN THE TREATMENT OF MYCOSES OF THE SCALP. A. M. Arievich and O. V. Tyufilina. (1958) *Vestnik Derm. i. Ven. (Moscow)*, **4**, 29.

The authors have given the name "epilin" to a complex compound of ethers of para-oxy-fatty aromatic and aromatic ketones synthesized at their suggestion. This preparation they find to be as good as or even better than X-rays or thallium acetate for treating fungous infections of the scalp: it is used as a 2% ointment in a lanolin vaseline base (sperm oil even better) or more recently as a 4% plaster. In all, 124 children (school, pre-school and crib stage) were treated and 1 adult (with chronic trichophytosis). One patient had favus, the others large spored ringworm. After the hair has been clipped or shaved the ointment is rubbed into the scalp once or twice daily for 6 days in a week (paying particular attention to the diseased area) and covered with gauze and a bandage (without cotton wool). Epilation follows as a rule in 18–20 days from the start of treatment (even as early as 10–12 days in young children, and as late as 30–35 days in some older children). In one, epilation occurred in 20 days, after 5 days inunction. In only 2 was epilation unsatisfactory. The dosage is according to body weight, e.g. 2–2·5 g. of 2% epilin ointment or of the 4% plaster in the day for a body weight of 10–14 Kg. A table of dosage is included, also a photograph showing the complete epilation; and one the regrowth of normal hair. The hair bulbs are atrophic on epilation: and the author stresses that epilation is complete over the whole scalp even if one area only is treated. Growth of hair follows usually 6 weeks after epilation but can be as early as 1 month or as late as 2 or even 2½ months. Epilation is assisted manually over the diseased area, and during the bald stage 2% iodine is applied; and a tar and sulphur ointment.

There were 92% recoveries and 8 relapses: and the children were kept under very close observation for side effects by means of blood and urine analyses; attention was paid to the general health. No general side effects were noted. In 30 children a follicular hyperkeratosis appeared at the site of inunction of epilin; and a lichenoid eruption which appeared at the time of epilation was probably lichen microsporosis. Easily treated conjunctivitis or blepharitis was encountered and also a considerable number had pyoderma of the scalp.

In all patients (95) observed after 3–12 months the hair had grown in completely and evenly.

M. S. S.

SKIN TROUBLE IN THE ELDERLY. R. F. Bowers. (1957) *Med. Pr.*, **238**, 508.

It is important to remember that a patient with symptoms referred to his skin is not necessarily suffering only from a skin disease and the first part of this article deals with some diseases of old age in which the skin may be influenced. Psychological disorders and cerebral arterio-sclerosis must be considered, melancholics characteristically denounce the efficiency of any form of treatment and they can be helped by the psychiatrist. Acarophobia is a most distressing delusion for which there is no effective remedy. Leucotomy or chlorpromazine may help the patient to live with his delusion.

In cardiovascular disease and in diabetes skin lesions may arise from circulatory deficiency. The immobility of rheumatoid arthritis may lead to atrophy of the skin and anaemia may interfere with the healing of leg ulcers. Of internal malignant disease carcinoma leading to obstructive jaundice, the reticuloses and leukaemia are most commonly associated with pruritus.

Of skin disorders particularly common in old age, senile pruritis and vaginitis and the bullous eruptions are discussed and treated along the usual lines. Neoplasms should always be treated, even though the expectation of life when the patient is seen appears to be very short, since patients unexpectedly live for years after which time treatment of the neoplasm may be much more difficult. In treatment the atrophic skin of old people must be treated with great respect. Antipruritic ointments are best avoided and if used the possibility of sensitization must be remembered. Hydrocortisones should only be used when all other measures have failed. H. R. V.

THE TREATMENT OF TUMOURS OF THE SKIN. G. B. Mitchell-Heggs and H. Morgan. (1957) *Med. Pr.*, **238**, 378.

This article discusses the treatment of many tumours both benign, premalignant and malignant. Lesions mentioned are pigmented naevi, melanoma, neurofibromata, molluscum, fibrosum gravidarum, skin tags, spider naevus, haemangiomata, keloids, fibroma, chondrodermatitis nodularis chronica helicis (for which excision is advocated) lipoma, leiomyoma, milia, sebaceous and dermoid cysts, solar and seborrhoeic keratoses, arsenical keratoses, cutaneous horn, squamous, basosquamous and basal cell carcinomata, intra-epidermal epitheliomata, Bowen's disease, Paget's disease, kerato-acanthoma, granuloma pyogenicum, molluscum contagiosum, warts, glomus tumour, metastatic tumours and lymphangiomata.

Thus the relatively short article covers the same ground which fills several books and good thumb nail sketches are given of these conditions. H. R. V.

THE EPIDEMIOLOGY OF SOME FUNGUS DISEASE WITH ESPECIAL REFERENCE TO RINGWORM. C. J. la Touche. (1957) *Med. Pr.*, **237**, 412.

An account is given of the common pathogenic fungi that attack both animals and man, and by control of infected domestic animals it has been shown that in Leeds it is possible materially to diminish the number of cases of ringworm due to *M. canis*. The incidence of ringworm in cattle due to *T. verrucosum* is increasing and it is to be hoped that it will be possible to control this. It is probable that such conditions as cryptococcosis will increase and there is no doubt that candidiasis (moniliasis) is more common perhaps as a side effect of the use of antibiotics.

H. R. V.

A NON-STEROIDAL ANTI-INFLAMMATORY AGENT IN DERMATOLOGY. E. Colin-Jones and G. F. Somers. (1957) *Med. Pr.*, **238**, 206.

A full review of the complex chemical compounds comprising glycyrrhetinic acid is given and it is emphasized that the properties depend on the method of preparation. In the series of cases in which the substance was tried it was found that the products of one particular manufacturing chemist were outstanding. It was found that the ointment was very much better than the ointment base alone and in 22 unspecified selected cases, was slightly superior to hydrocortisone. In 170 cases of various dermatoses there was improvement or marked improvement in infantile eczema, flexural eczema, nummular eczema, traumatic and contact dermatitis, napex and disseminated neurodermatitis and there was marked improvement in 24 out of 24 cases of pruritus associated with psoriasis and 14 out of 16 cases of pustular psoriasis. If this finding is confirmed another headache in dermatology has been eliminated.

The preparation can be used in combination with antibiotics (neomycin was the one chosen), and with tar preparations.

The authors are convinced that glycyrrhetinic acid is an active anti-inflammatory agent and that it has a place in dermatology. H. R. V.

SOME GENERAL PRINCIPLES UNDERLYING THE USE OF ADRENAL STEROIDS IN DERMATOLOGY. I. Neill. (1958) *Med. Pr.*, **239**, 259.

Most dermatologists have had a good deal of experience of the uses and limitations of the adrenal steroids in their branch of medicine. This article summarizes this experience, the writer finds that prednisolone has no advantages over cortisone. Potassium sulphate is always given when using systemic cortisone and methylandrostenediol 10 to 20 mg. daily when the course is prolonged to prevent, particularly osteoporosis. Systemic cortisone is used in acute systemic

lupus erythematosus, pemphigus vulgaris and in elderly patients in erythroderma and dermatitis herpetiformis. Presumably this latter is the bullous pemphigoid of English and American authors. Its use in very severe drug reactions and severe erythema multiforme is not mentioned. Locally the indications given follow generally accepted lines. The relative merits of lotion, cream or greasy base are not discussed but the statement is made that in acute conditions with exudates, grease intolerance readily develops and in chronic cases there is often some degree of grease sensitivity present. H. R. V.

INFANTILE ECZEMA. P. W. Hannay. (1957) *Med. Pr.*, **238**, 286.

This is an excellent practical article written obviously by one who has had to handle many of these cases. He regards this condition as occurring in children who have inherited a hypersensitivity both of skin and emotions and they react briskly to many stimuli. Once the condition has been established many stimuli such as teething, infection, frustration etc., will keep the condition going. In the management of the case great stress is rightly laid on explaining the nature of the condition to the parents and not only do the infants require sedation—bromide for preference—but it is a good practice to give sedatives to the parents. Sound advice is given on feeding, clothing and bathing and in local therapy, coal tar still retains its place in spite of local hydrocortisone. The dangers of giving steroids systemically without careful assessment of the case are stressed.

" Tubegauz " has simplified bandaging of these cases and restraint may be necessary by harness or splint.

This article should be read by those interested. H. R. V.

THE CHANGING PATTERN OF DERMATOLOGY. G. A. G. Peterkin. (1957) *Med. Pr.*, **238**, 311.

A review of the incidence and type of case seen in a busy skin department over the last 25 years shows many interesting changes in dermatology. Impetigo is now much more commonly of the staphylococcal type. Warts have increased at an alarming rate and they seem to be more resistant to treatment. Animal rigworm and *Candida albicans* infections have both increased and psychosomatic influences in the eczema-asthma group of diseases are now much more appreciated. Many new drugs produce eruptions but modern methods of treatment of these are efficient. Acne is still a problem and the position with psoriasis is virtually the same as 25 years ago. However, lupus vulgaris, lupus erythematosus, lichen planus and other bullous dermatoses can now all be controlled much more easily. H. R. V.

THE MANAGEMENT OF CHRONIC AND RECURRENT NON-INFECTIVE DISEASES OF THE SKIN. J. S. Pegum. (1957) *Med. Pr.*, **238**, 357.

It is important in the management of chronic and recurrent diseases of the skin to try to make the patient or the parents understand the difficulties of bringing about a complete cure by a simple explanation of the factors underlying the condition and at the same time detailing the means by which the condition can be ameliorated. The diseases discussed are infantile eczema, Besnier's prurigo, dermatitis due to degreasing agents, allergic contact dermatitis, acne vulgaris and pruritus ani. The treatment advocated is along the usually accepted lines, the author uses a lotion consisting of 1% hydrocortisone lotion in 5% glycerin and water as a paint in infantile eczema on the least severely affected areas. For nummular eczema he uses bathing in 1 : 10,000 potassium permanganate solution followed by Terracortril ointment, Aureomycin ointment diluted with soft yellow paraffin to $\frac{1}{4}$% strength or 1 part Vioform cream in 4 parts zinc oxide cream B.P. In pruritus ani he suggests that toilet paper may be a cause in this country. He does not state whether it is the consequences of the use of the toilet paper or whether the toilet paper acts as a direct irritant. H. R. V.

THE DIAGNOSIS OF COLLAGEN (CONNECTIVE TISSUE) DISEASES. J. S. Richardson. (1957) *Med. Pr.*, **237**, 307.

The main features of polyarteritis nodosa is that it may present in many ways depending on the organs involved in the process. Skin lesions appear in about half the patients but these are non-specific—erythema, urticaria, purpura and peripheral gangrene may all be seen and occasionally lesions resembling erythema nodosum or erythema multiforme occur. In scleroderma the lesion may be localized, diffuse or progressive. This latter variety is a systemic disease, the oesophagus is most frequently involved, fibrosis of the lungs and renal impairment also occur. Dermatomyositis may closely resemble progressive symmetrical scleroderma. The early symp-

toms of malaise, weakness, muscular pain and pyrexia, together with various non-specific skin reactions may lead to the diagnosis of an infectious process. In this condition, the association with internal neoplasm must always be remembered.

The author concludes his article by reminding the reader that although collagen diseases are fashionable at present they are nevertheless rare. H. R. V.

THE TREPONEMAL COMPLEMENT FIXATION TESTS IN PROBABLE LATENT SYPHILIS OR BIOLOGIC FALSE POSITIVE REACTIONS. A. H. Wheeler, Ella M. Brandon and A. C. Curtis. (1958) *J. invest. Derm.*, **30**, 265.

The success of the Treponema Pallidum Immobilization Test has because of its difficulty and costliness revived the quest for a satisfactory complement fixation test. Comparisons however of TCI and TPCF on the same specimen both in regard to reproducibility and to correlation between clinical diagnosis and serologic results leave the TPI comfortably in the lead. J. H. T. D.

CONTACT DERMATITIS FROM VITAMIN B_1 (THIAMINE). RELAPSE AFTER INGESTION OF THIAMINE. CROSS-SENSITIZATION TO CO-CARBOXYLASE. Niels Hjorth. (1958) *J. invest. Derm.*, **30**, 261.

The case is reported of a 17-year-old factory girl " who had suffered from eczema in infancy but had otherwise been healthy ". After industrial contact with thiamine complicated by its autotherapeutic ingestion for 4 months she developed a rash on the backs of the hands and around the mouth. When she gave up the job the eruption " disappeared after a few months " during which there had been 2 recrudescences following ingestion of coated tablets. She then did domestic work for 6 weeks after which she showed only " residual traces of lichenification ".

Patch tests with thiamine and the closely related cocarboxylase were positive, to the former in high dilution. Recrudescence was also provoked by intradermal injection but the resulting lesions are described as having " disappeared with scaling " within 10 days. The reactions of normal skin to the intradermal injection of this vitamin are described and discussed.

J. H. T. D.

THE DIGESTION OF COLLAGEN. J. M. Miller and B. Goldman. (1958) *J. invest. Derm.*, **30**, 217.

In vitro, a mixture of papain, urea and cysteine or one of ficin with thiourea digest collagen as effectively as the collagenase derived from *Clostridium histolyticum*. Such a preparation might be useful for the removal of damaged tissue from burns and would be handier than the product of this dangerous microbe. J. H. T. D.

TREATMENT OF PSORIASIS WITH LYSINE. L. C. Goldberg. (1958) *J. invest. Derm.*, **30**, 221.

Though *l*-lysine monochloride failed to improve any of 46 psoriatics the metabolic approach is not to be abandoned. J. H. T. D.

ALOPECIA AREATA : PITUITARY FUNCTION ASSESSED BY ASSAY OF PITUITARY GONADOTROPIN IN URINE. R. K. Winkelmann. (1958) *J. invest. Derm.*, **30**, 223.

The urinary excretion of pituitary gonadotropin was normal in all of 21 cases of alopecia areata.

J. H. T. D.

EVALUATION OF THE LEVEL OF PROPERDIN IN NORMAL ADULT HUMANS AND IN CERTAIN DISEASE STATES. A PRELIMINARY REPORT. V. D. Newcomer, E. G. McNall, C. Halde, E. T. Wright and T. H. Sternberg. (1958) *J. invest. Derm.*, **30**, 233.

Properdin is newly isolated euglobulin believed to be concerned in immunity and also in a paroxysmal haemoglobinuria. The serum levels of properdin were determined in a large number of normal Caucasians (i.e. non-un-whites) of both sexes and different ages. Some of the patients with L.E. pemphigus had rather lower levels but not more so than normal non-un-blacks (negroes).

J. H. T. D.

CROSS-SENSITIZATION BETWEEN NEOMYCIN AND STREPTOMYCIN. E. Sidi, M. Hincky and R. Longueville. (1958) *J. invest. Derm.*, **30**, 225.

Neomycin allergy manifests itself often only as a prolongation of the course of the disease being treated. The addition of hydrocortisone to other remedies sometimes makes it difficult to

detect the pejorations that may result. Owing to similarities in chemical structure it is considered inadvisable at any rate to treat streptomycin dermatitis with neomycin. J. H. T. D.

STUDIES ON THE QUANTITY OF RADIATION REACHING THE GONADAL AREAS DURING DERMATOLOGIC X-RAY THERAPY. III. SHIELDING TECHNICS AND OTHER PRECAUTIONS FOR REDUCING THE GONAD DOSE. W. D. Stewart, V. H. Witten and M. B. Sulzberger. (1958) *J. invest. Derm.*, **30**, 237.

To avoid any irradiation of the gonads it is advisable always to limit the area exposed by means of a suitable cone and for the patient to wear a lead rubber kilt. J. H. T. D.

THE HISTORY OF SWEAT AND PRICKLY HEAT, 19TH–20TH CENTURY. E. T. Renbourn. (1958) *J. invest. Derm.*, **30**, 249.

A delightful and scholarly account strongly to be recommended to all readers dermatological or otherwise who aspire to combine pleasure with instruction. J. H. T. D.

AN IMPROVED CULTURE MEDIUM FOR THE GROWTH OF STREPTOMYCES (NOCARDIA) MADURAE. I. W. Kuhl and W. Whigham. (1958) *J. invest. Derm.*, **30**, 269.

On Proteose No. 3 Agar containing 3% dextrose and 10% ascitic fluid, one should obtain "glabrous flat concave disk-like small colonies appearing not unlike fine latex rubber, as in an unused finger cot, but of an orange or red-orange tint". J. H. T. D.

EPIDERMAL SEPARATION WITH PURIFIED TRYPSIN. J. Fan. (1958) *J. invest. Derm.*, **30**, 271.

Impurities are not essential to the process. J. H. T. D.

INVESTIGATION OF POSSIBLE APOCRINE GLAND COMPONENT IN BASAL CELL EPITHELIOMA. Margaret G. Wood, K. Pranich and H. Beerman. (1958) *J. invest. Derm.*, **30**, 273.

Impossible to demonstrate it by histochemical means: that is to say specific staining for iron, glycogen, acid and alkaline phosphatase, cholinesterase and succinic dehydrogenase failed to detect any trace of glandular activity. J. H. T. D.

VASCULAR TRAUMA AND THE PATHOGENESIS OF THE KOEBNER REACTION IN PSORIASIS. R. P. Reinertson. (1958) *J. invest. Derm.*, **30**, 283.

The uninvolved skin of 20 patients with psoriasis was subjected to suction scarification and stripping with Scotch tape. In no case did Koebner reaction occur on the site of a petechia; scarification was effective in 7 cases. Stripping to about the level of the stratum granulosum is adequate; but it is impossible to say that epidermal injury alone is sufficient because it needs to be of an intensity that will inevitably provoke vascular reaction. J. H. T. D.

NITROGEN BALANCE AND SULPHUR EXCRETION STUDIES IN PSORIASIS. W. D. Block, W. A. Lea, A. C. Curtis and E. F. Cannon. (1958) *J. invest. Derm.*, **30**, 287.

It proved impossible by control of intake and excretion of nitrogen and sulphur to demonstrate any difference in the metabolism of these elements between two cases of psoriasis and a single control during a period of 15 days. J. H. T. D.

COMPARISON BETWEEN VISUAL GRADING AND REFLECTANCE MEASUREMENTS OF ERYTHEMA PRODUCED BY SUNLIGHT. F. Daniels and J. D. Imbrie. (1958) *J. invest. Derm.*, **30**, 295.

In the photoelectric colorimeter employed there is a photoelectric cell to measure the light passing through the filter on the way to the object and another to measure the light reflected at an angle of 45°. The filters, primary red, green and blue of the C.I.E. system, are carried in a turret head and 3 readings provide a useful numerical designation of the colour. But in order accurately to measure erythema an interference filter passing a wave length of 5420 or 5730 Å is more accurate; and to measure pigmentation one having a transmission maximum between 6000–6700 Å; though for most purposes the red glass filter is probably good enough. J. H. T. D.